Proceedings of the 3rd International Conference on Mechanics, Electronics Engineering and Automation

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ICMEEA 2026

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Preface

It is our great pleasure to present the proceedings of the 2026 3rd International Conference on Mechanics, Electronics Engineering and Automation (ICMEEA 2026). The conference was successfully held in Singapore in a hybrid format from April 24 to 26, 2026. ICMEEA 2026 brought together researchers, academics, engineers, industry experts, and practitioners from around the world to exchange the latest scientific achievements, discuss technological innovations, and explore future directions in mechanics, electronics engineering, and automation technologies.

In recent years, rapid advances in intelligent manufacturing, robotics, artificial intelligence, and communication technologies have accelerated the transformation of modern engineering systems. Emerging interdisciplinary approaches are reshaping industrial production, healthcare applications, autonomous systems, and smart infrastructure development. Against this backdrop, ICMEEA 2026 was established to promote international collaboration and foster academic exchange across multiple engineering disciplines, encouraging innovative research that integrates mechanics, electronics, computing, and intelligent automation.

The papers included in this volume demonstrate the diversity, innovation, and academic significance of the research presented at the conference. The proceedings cover a broad range of topics organized into several key thematic areas, including Autonomous Robotics and Intelligent Control; Soft Robotics and Bio-inspired Intelligent Systems; Multimodal Perception, Sensing and Navigation; Additive Manufacturing, Materials and Industrial Intelligence; Electronic Circuits, Computing Architectures and Communication Systems; and Smart Healthcare and Biomedical AI Applications. These contributions highlight recent progress in both theoretical research and practical applications, reflecting the rapidly evolving landscape of intelligent engineering and automation technologies. All submitted papers underwent a rigorous peer-review process to ensure the quality, originality, and relevance of the published work.

We would like to express our sincere gratitude to all authors for their valuable contributions, to the reviewers for their careful evaluations and professional expertise, and to the organizing committee members for their dedication and continuous support. Their collective efforts played a vital role in the success of ICMEEA 2026 and the publication of these proceedings.

It is our hope that this volume will serve as a valuable reference for researchers, scholars, engineers, and practitioners worldwide. By facilitating interdisciplinary communication and encouraging innovative exploration, ICMEEA 2026 is expected to contribute meaningfully to the advancement of mechanics, electronics engineering, automation, and intelligent systems in an increasingly technology-driven world.

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ICMEEA 2026

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